

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

LANGUAGE DEVELOPMENT CASE STUDIES USING THE
PEABODY LANGUAGE DEVELOPMENT KITS, LEVEL P

A thesis submitted in partial satisfaction of the
requirements for the degree of Master of Science in

Home Economics

by

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The thesis of Karen Ann Valentine is approved:

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DEDICATION

With love to my husband, Gary, for his constant encouragement throughout my thesis research and writing, and to my parents, Mr. and Mrs. C.A. Sjolund, for their love and understanding.

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ABSTRACT

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The primary purpose of this study was to determine if the six children involved in the case study would show improvement in language development after individualized instruction reinforced through behavior modification.

The children selected for this study included four male and two female students attending the California State University, Northridge Preschool Laboratory, who were handicapped in speech development.

Each participant received individualized instruction over a period of seven weeks based on lessons taken from Level P of the Peabody Language Development Kits. Behavior modification, through the use of reinforcement tokens, was used to stimulate correct responses.

This study showed there was improvement in language development, as evaluated by the instruments used in the study, for five of the six cases studied.

CHAPTER I

INTRODUCTION

Language development is a complex of many physical and psychological processes. Although this research does not attempt to identify causes, it does try to stimulate language development of the six preschool students involved in the case studies through individualized instruction using the Peabody Language Development Kits (PLDK), Level P.

Ours is a communication-oriented society in which each individual has the need to communicate with others. A child's inability to express himself often results in frustration which can hinder his normal development. This type of handicap is not predictable and therefore is of concern to all.

Man depends upon the exchange of thoughts and opinions in his daily living, and it is the preschool years that mark a vital stage in his language development. This research project has a potential value not only to the child himself, but to society as a whole. The better a child is able to communicate, the easier will be his adjustment to life situations. Language acquisition, which normally occurs rapidly during this developmental period, enables the child to become more adept at peer as

well as adult relationships.

The California Master Plan for Special Education of 1972 called for the integration of the handicapped child into the regular classroom. Many special children would no longer be separated into their own classes. It is believed that this integration will benefit both types of student through exposure to a variety of physical and emotional levels. It is important at this stage in a child's development to make the most progress possible in cognitive abilities.

Change in and of itself does not necessarily insure educational improvement, but in order to facilitate improvement in special education programs, change becomes inevitable. (5:3)

STATEMENT OF THE PROBLEM

The CSUN Preschool Laboratory has integrated the handicapped child into its regular preschool program. On the basis of information contained in the personal and family history forms, the initial testing of the preschool students and teacher observation, children were referred to the CSUN Speech Clinic for screening. Where the need warranted it, regular therapy sessions were established. Due to the clinic's full schedule and shortage of time, the speech therapist was only able to see the students twice each week. A few of the students from the preschool had already been in therapy at the speech clinic for one semester. Although the speech clinic did have success

with these students, the clinicians felt that they would be more successful with reinforcement from the preschool. The speech clinicians use a behavior modification system with the students, and asked that it be continued. Since additional work with the children was necessary, this research project began as an extension of that work already underway by the CSUN Speech Clinic.

Hence, the primary purpose of this study was to determine if these preschool children would show improvement in language development following a period of individualized instruction using the Peabody Language Development Kits, Level P and behavior modification, through the use of reinforcement tokens. A secondary purpose was to examine the adaptability of the PLDK to children with these communication difficulties.

ASSUMPTIONS

1. Language development can be evaluated by the instruments used in the study.
2. The Peabody Picture Vocabulary Test is a valid instrument for evaluating verbal intelligence.
3. Performance on the PPVT is an indication of language development.
4. Results obtained on Form A and Form B of the PPVT are equivalent.
5. The Peabody Language Development Kits lessons

are a successful instrument to stimulate language development.

LIMITATIONS

1. It was not possible to obtain a random sample due to the limitations established for case selection. Results obtained with these six students cannot be generalized to other preschool students.

2. A further limitation is that it will not be known how much of the students' improvement is related to the study, and how much is a result of normal development or other preschool experiences.

3. There may also be a difference in results obtained as a consequence of using more than one researcher to collect data.

4. The number of cases studied was limited due to time restrictions concerning the amount of time spent daily, and the number of instructional weeks available in the semester.

5. A further limitation is that the case studies were drawn from the CSUN Preschool Laboratory which limits the number of children enrolled with identified handicaps to three percent of its population. Of this three percent, only some of the handicaps are speech related.

DEFINITIONS AND ABBREVIATIONS

1. Behavior modification involves "the systematic application of psychological principles in order to change behavior in desired directions." (24:iii)

2. Individualized instruction refers to the one-to-one relationship between the researcher and the student as the program is adapted to fit the individual students' developmental level.

3. PLDK refers to the Peabody Language Development Kits, Level P.

4. PPVT refers to the Peabody Picture Vocabulary Test.

5. Preschool refers to the California State University, Northridge Preschool Laboratory.

6. Reinforcement token refers to the individual card from a deck of animal rummy cards. It is hoped that it will increase the likelihood of the rewarded behavior recurring in the future.

CHAPTER II

REVIEW OF LITERATURE

The topics to be considered in this review of literature have been limited to four areas that are most pertinent to the research study conducted. The first is that of theory of speech and language. The second is an introduction to behavior modification. The third concerns research relating to the Peabody Picture Vocabulary Test. The fourth concerns research relating to the Peabody Language Development Kits.

SPEECH AND LANGUAGE

Speech is the function that distinguishes man from the rest of the animal kingdom. Most researchers do not agree on the origins of speech only that language is a composite of sounds, some intelligible and some not. There is a distinction between speech and language.

Consider that speech is the utterance of sounds, while spoken language is the transmission of those utterances to another individual in an intelligible and meaningful fashion. (16:5)

The development of speech begins with the production of sounds first reflexively, then repetitively, and finally learned. An eclectic theory of language acquisition assumes that language is both innate and learned.

The child must have the wherewithal to use those tools. In addition, environmental stimulation and reinforcement must exist so that he can develop a language system that is common to his environment (both cultural and geographic). (16:25-26)

The ability to communicate verbally becomes very important in today's communication-oriented society.

Each individual living within a society has the need to communicate with others. One who expresses himself can usually satisfy his particular needs while inability to communicate often results in frustration. (11:1)

While it is recognized that communication skills are critical to social adjustment and academic learning, often these deficiencies are not detected or treated until the child begins school.

A growing consensus of opinion holds that by this time the critical period for learning language is largely past (Lenneberg, 1967; Tervoort, 1964; Elliot and Armbruster, 1967; McNeil, 1966), and gains made by subsequent special training do not seem to compensate for the time lost during infancy and preschool years. (12:522)

BEHAVIOR MODIFICATION

In the last decade behavior modification has grown from an orientation held by a few theorists and practitioners to an extremely productive and often controversial discipline. (17:ix)

There is a need for effective ways to handle various psychological problems.

To determine treatment procedures, the behaviorist turns to the experimental psychology literature for how behaviors (responses) are acquired, maintained and altered. Because the behaviorist assumes that all undesired behaviors (those that are not more easily explained in terms of organic disorders) are learned,

he draws most heavily on the area of learning to determine how the subject acquired the maladaptive behaviors. (17:9)

By definition "behavior modification involves the systematic application of psychological principles in order to change behavior in desired directions." (24:iii)

The strength of behavior modification is that it is not a set of fixed procedures. Rather, it is an orientation in which treatment procedures continually change as new experimental information comes in. (17:10)

There is a need for continual evaluation of its procedures to maintain validity in dealing with behavioral problems. In behavior modification the focus of treatment is on the present behavior rather than the underlying causes.

One of the most important advantages of behavior modification is that it can be carried out in a classroom or group situation as well as in a one-to-one relationship. The behavior modifier can even train the individual to alter his own behavior.

Beissel used the technique of behavior modification to increase the frequency of verbalizations by a preschool child, classified by her teacher as a nontalker.

Results showed that verbal behavior was predictable during the presence and absence of contingent social reinforcement. As expected, verbalizations were higher during contingent periods than noncontingent periods of reinforcement. (3:931)

Recent developments in operant conditioning procedures have extended the application of learning principles to language training with speech deficient children (Staats & Staats, 1963; Lovaas, Berberich, Perloff, & Schaeffer, 1966; Risley & Wolf, 1967; Reynolds & Risley, 1968; Sailor, Guess, Rutherford,

& Baer, 1968). Despite its relevant newness, the operant approach, based on reinforcement theory, is considered feasible in the investigation of underdeveloped speech. (3:931)

In summary, the argument is that if behavioral changes are desired (and behavioral problems constitute the vast majority of psychological problems), then behavior modification techniques should be used. Attempts to produce behavioral changes indirectly by dealing with supposed underlying causes or by producing cognitive changes are, at best, very inefficient. As a bonus, there often are cognitive changes that accompany behavioral changes. (17:15)

PEABODY PICTURE VOCABULARY TEST

The evaluation of that elusive human property known as intelligence involves the use of language and language skill. Yet the inherent purpose of intelligence testing is the measurement of innate constitutional properties that are not exclusively language (or language oriented). (16:154)

A common problem encountered by researchers who are involved in clinical or educational testing has been

...the selection of screening measures for children who have limited expressive vocabularies or who are verbally inhibited in testing or classroom situations. The Peabody Picture Vocabulary Test (PPVT) has been widely used to identify level of receptive language functioning and to assist in placing children in various remedial programs. (2:86-87)

Additional information concerning the test along with reliability and validity data may be found in the manual.

Sattler and Anderson designed a study to

...determine the validity of two pointing tests of intelligence--the Peabody Picture Vocabulary Test (PPVT) and the Stanford-Binet Intelligence Scale Modified (SB Modified)--by comparing them with the Stanford-Binet Intelligence Scale (SB) in normal and cerebral palsied populations. The PPVT has been generally recommended as being useful whenever a quick

screening device is needed (Burnet, 1965; Hammill & Irwin, 1965; Hughes & Lessler, 1965; Tempers & Ivanoff, 1965). However this recommendation does not hold for testing ethnic minority-group preschool children because the PPVT yields IQs that are considerably below those obtained on the SB... (23:119)

The authors found that the MAs obtained with the PPVT were more valid than the IQs when the basis for criterion was the SB. Also the PPVT and SB Modified were found to be "useful instruments to assess the intellectual ability of both normal and cerebral palsied, preschool, Caucasian children." (23:121-22) The recommendation was that the

SB be administered whenever the child's handicaps do not interfere with his ability to respond to the test questions. However, when speech or motor difficulties prevent the administration of the standard form of the SB, other tests, such as the PPVT and SB Modified, can be considered. (23:122)

Black (1973) investigated the performance of 100 children with developmental or acquired aphasia on the Arthur Adaptation of the Leiter International Performance Scale (LIPS). The sample group was evaluated with both the LIPS, which requires no verbalization by either examiner or child, and Form A of the PPVT, which assesses comprehension of spoken vocabulary. The results of the test-retest data showed that seventy-five percent of the children tested scored higher on the LIPS than on the PPVT.

This discrepancy in performance on the LIPS and PPVT is consistent with the nature of the language problems demonstrated by the subjects, with performance on the PPVT (a measure of a language component of intelligence) being more impaired than performance on a purely nonverbal test of intelligence. The data

suggest that these tests are assessing two dissimilar components of intelligence, as the test titles indicate. Performance on the LIPS appears to be a reasonable assessment of intellectual level without the adverse "down-pulling" effect of the language disability, while performance on the PPVT is more a reflection of the extent and nature of the language problem than of intellectual functioning. If this reasoning is correct, an averaged score obtained from performance on the two tests should provide a score similar to that obtained by use of more comprehensive intelligence tests such as the WISC or Stanford-Binet with these subjects. Previous research (Spellacy and Black, 1972) reporting a correlation of 0.71 between a pooled IQ obtained by averaging the PPVT and LIPS IQs and WISC and Stanford-Binet IQs has suggested that this is true. (4:532)

Ali and Costello conducted a study which was a modification of the PPVT. They attempted to

...standardize administration procedures and to control factors observed to affect test performance of preschool disadvantaged children adversely... The modified PPVT (MPPVT) consisted of 70 items randomized for difficulty level, specified stimulus instructions, and a controlled schedule of verbal reinforcements. The PPVT was administered to 52 and the MPPVT to 56 black children from the same preschool population. Results suggested that the MPPVT positively influences test scores, and is well accepted by examiners. There were no sex differences. Errors increased when the reinforcement schedule changed from one hundred percent to fifty percent. (2:86)

The authors found

...there were no significant mean gains on the retests which suggests that practice with either the PPVT or MPPVT has no overall effect on scores. These findings counterbalance much of the criticism leveled at the PPVT as an unstable measure which is easily influenced by test experience. (2:89)

PEABODY LANGUAGE DEVELOPMENT KITS

In a paper by Blue and Beaty (1974), progress in materials and techniques for language remediation was

reviewed, and the PLDK was identified as one source that can be used by a teacher or clinician to aid in planning language subskill remediation.

Clinical instruction in education involves the division of learned global skills into components and a subsequent objective and/or subjective evaluation of those components in the individual child. Instruction that is based on strengths and weaknesses should then be possible. An effort to divide this global behavior into chartable subskills is demonstrated in the development of the Illinois Test of Psycholinguistic Abilities (ITPA). The use of this instrument for language-subskill analysis has been discussed by Bateman (1964; 1965), Kirk and Bateman (1962), and Kirk and McCarthy (1961). (6:73)

The planning of a program for a child identified by testing as having a language weakness remains with the classroom teacher. The PLDK is one source of information with many activities that can be helpful in strengthening specific language skills.

...the lessons are pertinent to subskill remediation; their primary lack is an evaluation of each activity in light of a specific schema of language factors. That is, any activity may provide a starting point around which to plan for children with specific language-area weaknesses. The authors have attempted to do this for the concerned teacher. (6:75)

Scofield (1972) reported that in a survey of teachers of EMR children in California, nineteen percent (21 classes out of 112) reported using the PLDK as a source of language development materials in the classroom. In concluding, the author made a strong recommendation in favor of using the PLDK with EMR children because its psycholinguistic approach and variety of lessons is appealing to them. (14:123-25)

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Carter used the PLDK as part of a language enhancement program with first grade children of the New Orleans Education Improvement Project (NOEIP). One of the primary goals of the NOEIP has been to stimulate reading and general academic attainment. It was concluded at the end of the study that the language development program was satisfactory because the children made gains on all areas tested with the ITPA. (8:352-55)

In a study conducted by Clasen, Spear and Tomaro thirty children, meeting Office of Economic Opportunity guidelines for disadvantaged backgrounds, were assigned at random to two treatment conditions during an eight week, three hour per day, Head Start program: (1) the treatment group received an intensive language development program based on the PLDK; (2) the control group participated in a conventional socially oriented preschool program with only incidental attention to language skill building. The study revealed that the treatment group made significant improvement in linguistic improvement over the eight week period, and the advantage resulting from intensive language training continued through one year of kindergarten. (9:401-05)

In a study by Shiach

...two groups of severely subnormal children were studied, an experimental group of 11, and a control group of 10 children. The experimental group was given daily instruction with Level P of the Peabody Language Development Kits. Both groups were pre- and post-tested on some subtests of the Illinois Test

of Psycholinguistic Abilities. After an experimental period of 10 months, the experimental group showed significant gains over the control group on the ITPA subtest scores. (25:294)

This study lends some weight to the claims of the authors of the Peabody Language Development Kits in suggesting that even over a relatively short experimental period severely subnormal children make substantial improvements in their language ability. This study suggests that the tailoring of individual language problems to individual children is not necessary in all cases, and that granted a certain language development already, severely subnormal children can be taught effectively as a group. (25:297)

Quigley interviewed eleven nursery teachers from Educational Priority Areas in England on their reactions to the PLDK, Level P.

Opinions as to the worth and efficacy of the Kit varied widely and seemed to be largely determined by the personality of the teacher concerned. None of the interviewees had a clear idea of the principles underlying the construction of the Kit. (21:155)

"The source of discontent was quite obvious--the Kit originated in the USA and not in Great Britain."

(21:157) Comments ranged from criticism of the materials to the American accent in the recorded songs and stories.

Apart from the anti-American streak most of the comments on the materials provided were reasonable and rational. It was generally admitted that most of the stuff had great child-appeal; was with a few exceptions well-devised and robustly constructed and "even withstood the mauling it got here". (21:157)

Four of the teachers were totally hostile toward the Kit, five were enthusiastic about the program, and two were uncertain that the Kit was the way to solve the language problem.

The selection of Level P of the PLDK as the instrument to be used for administering the daily lessons was made because the purpose of the case studies was to research individual language development, and the rationale for the PLDK was to stimulate language development.

Level P of the PLDK is designed for children who are functioning at a mental age of 3 to 5 years. More specifically it is intended for: kindergarten children from disadvantaged areas of urban and rural communities; average and above 3 and 4 year old pre-school children; young, school-aged, educable retarded children; and pre-teenaged, trainable retarded children.

This level is designed primarily to stimulate the receptive, associative, and expressive components of oral language development. Concomitant goals are to improve intellectual functioning and enhance future school progress. The Kit stresses an overall oral language development program, rather than specific training in selected psycholinguistic processes. Reception is provided through the three key sense modalities of sight, hearing, and touch; expression is provided through the vocal and motor channels. However, exercises are concentrated on the development of cognitive processes involving divergent, convergent, and associative thinking. Level P emphasizes, more strongly than the other levels of the Kits, the teaching of patterns of syntax and simple grammar through an emphasis on patterned sentences. This emphasis is prefaced on the hypothesis that cognitive development is facilitated by the mastery of the structure of language. (10:viii)

The literature cited indicates that behavior modification is an acceptable technique for use with speech deficient children to stimulate language development. The research also shows that the PPVT is used as a measure of IQ, reflecting verbal intelligence. Also, the PLDK is identified as a source to be used in language remediation.

CHAPTER III

PROCEDURE

Much research has been conducted in the field of language remediation regarding successful techniques used to stimulate the development of language. This research project focuses on six case studies in which specific instruments were used to stimulate children's speech.

DESCRIPTION OF STUDY

The six cases selected for study were chosen as an extension of speech therapy underway at the CSUN Speech Clinic. The speech clinic had screened all children attending the CSUN Preschool Laboratory at the beginning of the semester. The children selected for this study were either accepted as clients of that clinic, or scheduled for possible future therapy. The speech clinic program involves the use of behavior modification, a technique which is not emphasized by the CSUN Preschool Laboratory curriculum. The purpose of this study was to determine if the students involved in the case study would show improvement in language development after individualized instruction reinforced through behavior modification.

After reviewing the literature for successful techniques to be used with speech deficient children, it

was decided to base the daily lessons on Level P of the PLDK. The literature showed that behavior modification is a successful technique for use with language remediation and that the PLDK is an acceptable tool for this purpose. (3:931,6:73)

The PLDK does not furnish a means for recording data. Therefore, the researcher designed forms suited to this purpose. These forms, with provision for recording the children's responses to each lesson, are located in their entirety in Appendix A.

A pilot study was conducted to determine the basic feasibility of using the test materials and the recording forms. The pilot study also allowed for refinement of research techniques and served to establish reliability between the involved researchers.

Cases were selected, and baseline data, in the form of the Peabody Picture Vocabulary Test, was collected on each child prior to application of the first PLDK lesson. The children began their participation with lesson one of the PLDK and continued at their own rates of speed for twenty to thirty minutes a day, four days a week. The study took place over a seven week period beginning on April 1, 1974 and ending on May 20, 1974.

This procedural chapter includes detailed information concerning the basis for case selection, the procedure of investigation, the instruments, and the collection

of data. The pilot study and changes made in the procedure as a result of the pilot study complete this chapter.

Case Selection

Cases chosen for this study included four male and two female children attending the CSUN Preschool Laboratory. The children ranged in age from four years and six months to six years and three months. All children were referred because of developmental disabilities.

The six children who participated in the study constituted the total number of children from the sixty-four children attending the CSUN Preschool Laboratory who met the criteria for the study, and who attended the preschool at least four days a week.

Due to the nature of the study, the selection of participants was based on language development as evidenced by meeting at least two of the three criteria for case selection: (1) the children must have been recommended by the preschool staff; (2) the children must have been attending or have been recommended for possible future speech therapy; and (3) the children must have scored in the lower ten percent of the preschool students on the Stanford-Binet. A justification for using the Stanford-Binet as a screening test is that it is a highly verbal test, reflecting speech and communication ability.

The students involved in this study show a wide range of development from non-verbality to speaking with a limited vocabulary. Table 1, page 20, shows the criteria met by each of the case study participants.

Procedure of Investigation

After the cases to be studied were selected a treatment schedule was established. The author and her research assistant each administered the program to three students four times per week. Both worked with all six children on alternate days. The research was conducted in the conference room at the preschool and lasted from twenty to thirty minutes per day per case over a period of seven weeks. The children were taken from their classes individually and returned after the lessons.

Lessons from the PLDK were administered sequentially beginning with lesson one. Children worked at their own rates of speed. The number of lessons completed by each child is recorded in Table 3, page 44. Mastery of one lesson was not required before advancing to the next.

Table 1

Criteria for Case Selection Met by
Case Study Participants

Participants	Scored in Lower 10% of Preschool Students on the Stanford-Binet	Attending CSUN Speech Clinic	Scheduled for Possible Future Therapy	Recommended by CSUN Preschool Staff
Case Study 1: J.C.	X	X		X
Case Study 2: B.C.	X		X	X
Case Study 3: J.H.	X		X	X
Case Study 4: N.J.		X		X
Case Study 5: K.J.	X		X	X
Case Study 6: P.R.	X	X		X

Children were rewarded with individual cards taken from a deck of animal rummy cards for correct responses to the PLDK lessons. Awards were applied as indicated by entries on the recording forms (Appendix A).

Instruments

Test materials consisted of Forms A and B of the Peabody Picture Vocabulary Test, Level P of the Peabody Language Development Kits, and reinforcement tokens.

Peabody Picture Vocabulary Test. The PPVT is an untimed individual test designed to provide an estimate of verbal intelligence from measuring hearing vocabulary. (7:822) It consists of a test booklet of 150 plates of four numbered pictures and three practice plates. The same booklet is used for Form A and Form B of the PPVT with different responses required for each form.

The researcher read the stimulus word with no special explanations, and the student pointed to the picture which best illustrated the word. Items in the test booklet are arranged in ascending order of difficulty.

Although the manual gives suggested starting points for different ages, each child tested in the study began with test plate 1. It was felt that the children were below the norms established by the manual for age level recommendations. Thus, the "basal" was set at test plate 1 and the "ceiling" was determined by six failures out of eight consecutive responses. Forms A and B of the PPVT were used to pre-test and post-test the children involved in the case study.

Level P, Peabody Language Development Kits. Each child involved in the case study completed a series of lessons from the PLDK, except for J.C. The reasons for his nonparticipation in this aspect of the study are discussed in Chapter IV, Page 30. General changes to the PLDK were made to adapt the kit to the one-to-one situation and to fit the needs of the individual students. It was not expected that each child complete the same number of lessons. The preschool students were not compared to each other by performance on the lessons. The lessons were used only as a means of stimulating language development throughout the course of the case study.

Level P of the PLDK was designed primarily for children between the mental ages of three and five to stimulate overall language development. A secondary purpose was to increase their verbal intelligence, thereby

enhancing their potential for later school development.

(10:xxi)

A number of changes to the PLDK were made to adapt it for use with this particular group of children. The changes made as a result of a pilot study (see page 25) are listed below:

1. Since the PLDK was designed for use with groups, dialogue changes were made throughout the lessons to adapt to the one-to-one situation.
2. Additional changes were made to simplify group activities so that two people could complete them.
3. Many of the lessons called for sentence pattern responses. Due to the developmental levels of the children involved in the case studies, simpler responses were accepted. Sentence pattern responses were encouraged but not required.
4. Special consideration was made for the non-verbal children. When activities called for verbal responses they were reversed. The researcher would name the action or object, and the child would point or demonstrate the action depending on the situation.
5. Rewards were administered for correct responses even when the words were not clearly pronounced. Correct responses were then enunciated by the researcher as reinforcement.
6. Assistance was given when necessary for

activities that involved some manual dexterity.

7. Many of the lessons involved singing with the PLDK records. This activity was included in lessons even when the child was completely, or partially non-verbal, but the child was rewarded for attempts to sing along or for showing some involvement by clapping or keeping time to the music.

Reinforcement tokens. Reinforcement tokens consisted of individual cards from a deck of animal rummy cards. They were given out at intervals as indicated by response entries on the response recording forms (Appendix A). No reinforcement schedule was provided with the PLDK. The tokens were administered immediately following a correct response. In the case of an incorrect response, no reward or punishment was administered, but the appropriate response was indicated. Positive reinforcement was used with the desired impact of stimulating correct responses.

Collection of Data

A complete set of forms used in the case study is located in Appendix A. There are forms for introducing the study, testing with the PPVT, a general comment sheet, and one form for each of the twenty PLDK lessons covered during the study. The forms detail the desired responses and indicate the schedule for dispensing reinforcement

tokens..

The forms were completed by the researcher as the lessons were in progress. Any other information recorded was put on the comment sheets after the child was returned to his class. The forms were designed so the researcher would only have to check the appropriate column for each response. This minimum effort at recording the responses did not seem to interfere with the children's completion of the lesson.

At the end of the case study the forms were used as a means of compiling data to be included in the tables. They also provided the researcher with an overview of each child's progress during the course of the study.

Data compiled at completion of the study included attendance records of case study participants and interruptions to the schedule (Table 2, page 43), the number of lessons completed by each child (Table 3, page 44), and the net change between the PPVT pre- and post-testing (Table 4, page 45).

PILOT STUDY BY AUTHOR

A preliminary study with four children from the New Horizons Center in Sepulveda, California was carried out by the researcher to determine the basic feasibility of using the test materials and to establish basic procedural techniques.

The New Horizons Center is a school with a program for exceptional (e.g., retarded, emotionally disturbed, etc.) children. Three of the four children involved in the pilot study were afflicted with Down's Syndrome.

There were two researchers involved in the pilot study, the author and one research assistant. During the week of the pilot study, each of the researchers was able to observe the other administer testing and lessons to the children. The author sought to establish a consistency of technique to minimize the influence of the two researchers working with children in the case studies. The pilot study indicated the following:

1. Absence of the participants ran very high.

Only two of the children were present all five days. The director of the New Horizons Center explained that absence due to illness runs very high with these children because those afflicted with Down's Syndrome are quite susceptible to colds and other minor ailments.

2. Participants demonstrated low competency levels.

The children who participated in the pilot study were at lower levels of development than was anticipated. One was completely non-verbal while the others were very, very limited in their use of single words.

3. Level P of the PLDK would be adaptable. The three lessons involved from the PLDK indicated the lessons would not require too many changes to be used.

4. Participants preferred animal rummy cards as reinforcement tokens. In the beginning of the study the children were allowed to select reinforcement tokens of their choice from a variety displayed on a table. After observing their reactions it was decided to use the picture cards from a deck of animal rummy cards for the remainder of the study.

5. The data recording forms needed minor revision. The forms needed to be changed to include the additional categories of comprehension of idea, no response, and space for comments.

Procedural Changes as a Result of the Pilot Study

In summary, the pilot study was designed to test the materials and procedural techniques. Materials and techniques used in the pilot study were evaluated for simplicity, directness, and accuracy of response. As a result of this evaluation, changes were made to record comprehension as well as performance through action and verbalization. The PLDK lessons were changed from group to one-to-one activities. This required minor changes in dialogue, the number of objects used, and desired responses. All changes are listed on page 23 of this chapter.

The pilot study alerted the researcher to be prepared for differences in competency levels and high absence rates. Although a one-to-one correlation between

the children in the pilot study and case study was not expected, similarities were expected to exist in the areas of developmental lag and limitation of speech.

CHAPTER IV

RESULTS AND DISCUSSION

The basic objective of this study was to determine if the six children involved would show improvement in language development over the seven week period the study ran. Each of the participants was given individualized instruction reinforced through behavior modification. The results of each case study will be discussed separately.

CASE STUDY 1: J.C.

J.C. was selected as a participant in the program because he met all the criteria for case selection. He was one of the preschool students attending the CSUN Speech Clinic. He was recommended by the preschool staff for inclusion in the study. Also he scored in the lower ten percent of the preschool students on the Stanford-Binet. His score was -3.12 standard deviations from the established mean IQ of the test.

This child was a Caucasian male, five years and one month of age at the time of initial testing. At the beginning of the case study J.C.'s behavior was very erratic and he was difficult to handle. For example, one day he might be very calm and quiet and allow one to talk

and play with him, while the next day he might be fussy, crying, and generally disinterested.

The speech clinician who worked with J.C. said he exhibited the following characteristics: hyperactive, hyperkinetic, perseveration, disinhibition, hyperdistractibility, withdrawal, tantrums, and inability to focus. His expressive language consisted of grunts, gestures, jargon, and echolalia. Also J.C. was not completely toilet trained.

A record of observations from the daily schedule is included in Appendix B.

As the study progressed it became evident that J.C. could not follow the same schedule of lessons as the other students. His lack of verbal competence and immaturity, as evidenced by his erratic behavior and inconsistent moods, interfered with the progress of the case study. He was at a developmental level too low to complete any of the planned activities. During the second week of the study an amended program was planned for J.C. Since virtually no responses were obtained with the PLDK lessons as presented in the manual, the lower end of the Kit was extended.

After consulting with the preschool staff, the author decided to work with J.C. in his classroom. This alleviated the trauma of removing him from the classroom where he was comfortable. The P. Mooney puppet was used

each day to stimulate communication between J.C. and the researcher. Simple games of touching and pointing were played, in addition to looking at picture books and puzzles found in the classroom. No other PLDK materials were used so it would not interfere with future lessons. It was hoped that the P. Mooney puppet would provide the link between the classroom interaction and the regular case study program as J.C. progressed to that level.

Since J.C. did not follow the regular daily lesson plans, the schedule of dispensing reinforcement tokens was different. He was rewarded after following directions correctly and after completing activities successfully.

One of the most significant problems J.C. had was an extremely short attention span. A daily effort was made to stimulate increased attention. In the beginning J.C. would only follow a directed activity for two to three minutes, but by the end of the study he was able to concentrate on an activity (e.g., looking at books) for twenty or more minutes with only brief periods of distraction.

As the program concluded J.C. was responding well in pointing to objects when requested. He was becoming more open and friendly with the author. He demonstrated these feelings by running up to the author and showing her things, and by the physical contact of touching and

holding.

J.C. was almost totally nonverbal in the presence of the author when the study was undertaken, but toward the end he made simple word responses. He demonstrated competency at the end of the case study, but whether or not he used speech depended on his mood.

When pre-tested J.C. scored an IQ of 21 on Form A of the PPVT, and when post-tested with Form B of the PPVT he scored an IQ of 37.

CASE STUDY 2: B.C.

The selection of this child for inclusion in the program was based upon the recommendation of the preschool staff and the fact that B.C. scored in the lower ten percent of the preschool students on the Stanford-Binet. His score was -2.37 standard deviations from the established mean IQ of the test.

B.C. was a negro male, six years and one month of age at the time of initial testing. His expressive language consisted of single word responses or sentence fragments. He was easily distracted from cognitive activities and showed symptoms of being hyperactive. He appeared to prefer gross motor to fine motor activities. When he was in the play yard it was extremely difficult to get him to come inside to participate in the study. His perseveration was particularly noticeable concerning

food. During snack time he would keep eating until there was no food or drink left on the table. Sometimes he was found looking through the trash cans for additional food. Family history indicated he received a well balanced diet at home.

According to the preschool schedule the time set aside for the case study preceded the daily snack time. B.C. would frequently ask if it was snack time yet, especially when the lesson involved food of some type. He often tried to eat the artificial fruits and vegetables from the PLDK.

A record of observations from the daily schedule is included in Appendix B.

At the beginning of the case study B.C. was sometimes reluctant to enter the research room, but as the study progressed he participated willingly. Whenever possible, he was not taken from the play yard for the case study because of his strong dislike for leaving outdoor activities.

Initially, B.C. made only imitated single word responses to the PLDK lessons. As the study progressed he began making spontaneous responses and imitating sentence patterns. On occasion, he made voluntary statements using sentence patterns. The PLDK lessons were adapted so B.C. could demonstrate success. For example, when the lesson called for a sentence response, a single

word response was accepted. The desired sentence response was repeated to encourage imitation. Additional information on changes made to the PLDK may be found in Appendix C. B.C. participated in 13 out of 25 days of the study. Absences were due to illness, class field trips and lack of interest because of involvement in classroom activities.

When pre-tested B.C. scored an IQ of 47 on Form A of the PPVT, and when post-tested with Form B of the PPVT he scored an IQ of 67.

CASE STUDY 3: J.H.

The selection of J.H. as a participant in the case study was based upon the recommendation of the pre-school staff and the fact that he scored in the lower ten percent of the preschool students on the Stanford-Binet. His score was -1.56 standard deviations from the established mean IQ of the test.

J.H. was a Caucasian male, four years and six months of age at the time of initial testing. He was afflicted with Down's Syndrome and had limited verbal competence. Most of his expressive language consisted of single words. His speech was not distinct and he did not enunciate. He wore glasses at all times. He had no difficulty with gross motor activities, but he needed some assistance with his fine motor coordination.

Activities that were most difficult for him involved manipulating or putting together small objects.

At times J.H. was reluctant to leave the outdoor play to go to the research room. This problem was circumvented either by taking him into the research room before the class went out or by waiting until the group came back in. Once there, J.H. participated willingly in the PLDK lessons.

A record of observations from the daily schedule is included in Appendix B.

J.H. had a very limited vocabulary at the beginning of the study and didn't use what he had on a regular basis. He could repeat words but seldom initiated the conversation. As the study progressed changes were observed. J.H. would frequently say "P. Mooney" even when not in the research room. He became more interested in the lessons and did not resist them. The individualized instruction gave him the opportunity to work at his own pace. His preschool teacher observed that he was using some two and three word phrases in class, which he hadn't done before. His fine motor coordination was showing improvement in manipulation of the manikin. J.H. participated in 16 out of 25 days of the study. Absences were due to illness and class field trips.

When pre-tested J.H. scored an IQ of 50 on Form A of the PPVT, and when post-tested with Form B of the PPVT

he scored an IQ of 67.

CASE STUDY 4: N.J.

This child was included in the study because she met two of the criteria established for case selection. N.J. was one of the preschool students attending the CSUN Speech Clinic, and she was recommended for inclusion in the study by the preschool staff.

N.J. was a Mexican-American female, four years and seven months of age at the time of initial testing. The language spoken in her home was Spanish, although she was bilingual. N.J. was generally a quiet girl who didn't speak any more than was absolutely necessary.

Throughout the course of the case study N.J. participated willingly. She would immediately stop whatever activity she was involved in when the researcher entered the room.

A record of observations from the daily schedule is included in Appendix B.

N.J. responded well to the individualized instruction. Although she was very quiet and hesitant to respond in the beginning, she changed over the weeks of the study. She became more verbal and began showing affection toward the researcher. This was evidenced by hand holding, hugging, and a general warmth of atmosphere.

Very few changes to the PLDK were necessary for

N.J. to complete the lessons successfully. Simple word responses were accepted in place of sentences. In the beginning of the study N.J. almost always made single word responses. She also would not sing along with the songs in the lessons. As the sessions progressed she began imitating sentences more often, singing with the songs, and giving spontaneous responses. With only one example, she could give a series of sentence responses.

Although N.J. came from a Spanish speaking home, she seemed to understand what was said most of the time. Sometimes questions or situations would have to be explained more than once, but she could follow directions very well. It is not known why N.J. was hesitant to speak. She may have actually had a larger vocabulary than her spoken vocabulary reflected.

Both gross motor and fine motor activities presented very few problems to N.J. She had very good overall coordination.

When pre-tested N.J. scored an IQ of 99 on Form A of the PPVT, and when post-tested with Form B of the PPVT she scored an IQ of 117.

CASE STUDY 5: K.J.

The selection of this child for inclusion in the program was based upon the recommendation of the preschool staff and the fact that K.J. scored in the lower ten

percent of the preschool students on the Stanford-Binet. Her score was -1.62 standard deviations from the established mean IQ of the test.

K.J. was a Caucasian female, five years and ten months of age at the time of initial testing. She was afflicted with Down's Syndrome and had a limited expressive vocabulary. Most of her language consisted of single word responses. When it was possible to avoid a verbal response K.J. would nod or point if applicable. She was extremely soft-spoken and would often have to repeat her answers to be heard. She had no difficulty with gross motor activities, but she needed some assistance with her fine motor coordination. Activities that were most difficult for her involved manipulating or putting together small objects.

Each day of the case study K.J. participated willingly. She would stop with any activity she was involved in to go to the research room with the researcher. She seemed to enjoy the individualized instruction and responded to the extra attention.

A record of observations from the daily schedule is included in Appendix B.

Although K.J. was basically a very quiet girl who kept mostly to herself, her preschool teacher observed a change in behavior toward the end of the semester which coincided with the end of the study. She became much more

aggressive and numerous times she actually struck another child. The reason for this change was not known, and there was not enough time left in the semester to ascertain whether this was a temporary phenomenon.

As the study progressed it became evident that K.J. had a larger vocabulary than was originally thought. She was able to identify many of the items in the PLDK the first time she was exposed to them. In the beginning K.J. was very hesitant to respond and answered questions with single words. Slowly she began imitating sentence patterns but not all of the time. She would lapse back into simple responses.

When pre-tested K.J. scored an IQ of 71 on Form A of the PPVT, and when post-tested with Form B of the PPVT she scored an IQ of 59.

CASE STUDY 6: P.R.

P.R. was selected as a participant in the case study because he met all the criteria for case selection. He was one of the preschool students attending the CSUN Speech Clinic. He was recommended by the preschool staff for inclusion in the study. Also, he scored in the lower ten percent of the preschool students on the Stanford-Binet. His score was -1.42 standard deviations from the established mean IQ of the test.

This child was a Caucasian male, five years and

four months of age at the time of initial testing. The clinician from the CSUN Speech Clinic made the following observations on P.R.'s status during the semester preceding the case study. His expressive language consisted of various vocalizations and gestures, but no intelligible words. He was able to imitate auditory cues and gross motor arm and leg movements. Discrete responses allowed P.R. to demonstrate (expressive skills) that which he understood (receptive skills). Previous CSUN clinic testing indicated that P.R.'s receptive language ability and motoric skills were one to two years behind age level norms and that he was non-verbal.

A record of observations from the daily schedule is included in Appendix B.

From the very beginning of the case study P.R. was enthusiastic. He couldn't express his feelings verbally, but he showed that he was enjoying himself in other ways. He left the classroom with the researcher enthusiastically with only one exception. He demonstrated his emotions by hugging the PLDK materials and by showing the reinforcement tokens to his peers. He made an effort to respond even when he wasn't understood.

Initially P.R. made no intelligible verbal responses, but during the weeks of the study he began to say a few words. The lessons were adapted to enable P.R. to demonstrate success in the activities. Instead

of requiring a verbal response, the activity was modified so the researcher could have him make a selection or give a pointing response. It was apparent that he understood what was happening because he followed directions quite accurately.

He had difficulty with fine motor coordination but did quite well in other aspects of the lessons. He knew many colors, the body parts, geometric shapes, articles of clothing, and other miscellaneous facts that enabled him to complete the lessons successfully.

When pre-tested P.R. scored an IQ of 86 on Form A of the PPVT, and when post-tested with Form B of the PPVT he scored an IQ of 97.

GENERAL COMMENTS

Each of the children involved in the case study began at different developmental levels, and thus progressed at different rates. Although the children were not compared to one another in any way, a comparison of the number of lessons completed may be found in Table 3.

Case Study 1: J.C. did not complete any of the lessons taken from the PLDK, but he participated in all but four days of the study. As was previously explained, individualized instruction was given to him at levels below the PLDK.

As indicated in Table 2 there was an attendance

problem concerning Case Study 2: B.C. and Case Study 3: J.H. The high number of absences by these participants were due to illness, which also affected the number of scheduled lessons completed.

Results of the pre- and post-testing of case study participants is shown in Table 4. Five of the six children tested showed improvement in their PPVT scores.

Table 2
Case Study Attendance
and Interruption Schedule

LEGEND

-  Student Present
-  Absent, Illness
-  Class Field Trip
-  Researcher Absent
-  Preschool Open House

Case Study
Partici-
pants

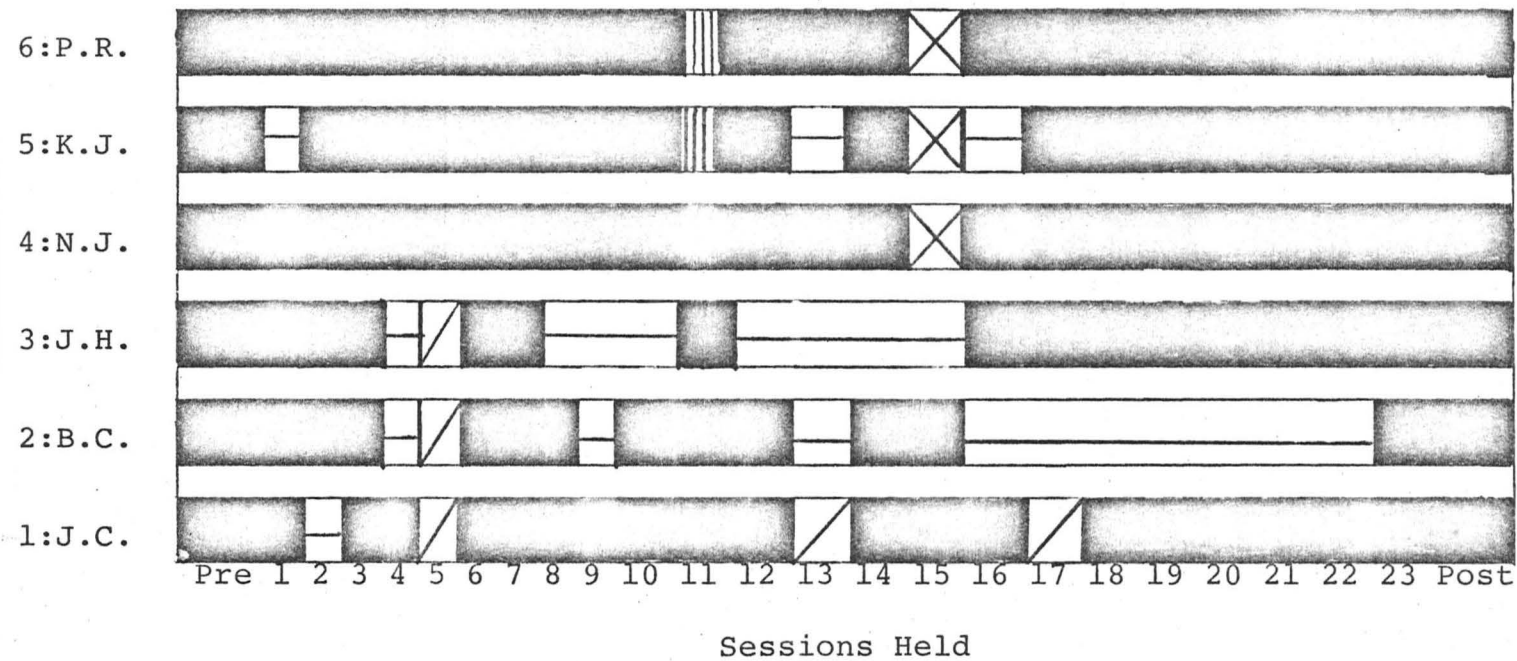


Table 3

Comparison of PLDK Lessons Completed
by Case Study Participants

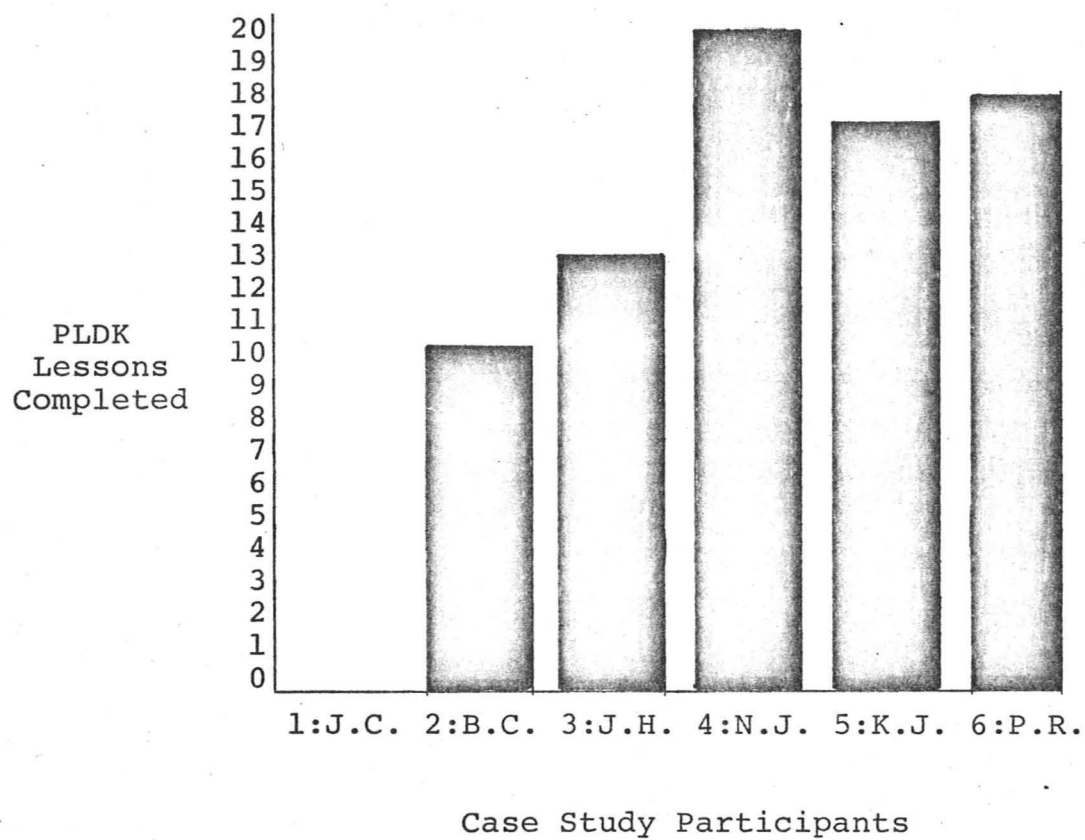


Table 4
Results of PPVT Testing of Participants

<u>Case Study</u>	<u>Pre-Test</u>	<u>Post-Test</u>	<u>Net Change</u>
1: J.C.	RAW: 13 IQ: 21 MA: 2-2	RAW: 17 IQ: 37 MA: 2-4	Increased
2: B.C.	RAW: 28 IQ: 47 MA: 2-11	RAW: 40 IQ: 67 MA: 3-10	Increased
3: J.H.	RAW: 17 IQ: 50 MA: 2-4	RAW: 38 IQ: 86 MA: 3-8	Increased
4: N.J.	RAW: 45 IQ: 99 MA: 4-5	RAW: 59 IQ: 117 MA: 6-8	Increased
5: K.J.	RAW: 41 IQ: 71 MA: 3-11	RAW: 36 IQ: 59 MA: 3-7	Decreased
6: P.R.	RAW: 42 IQ: 86 MA: 4-0	RAW: 54 IQ: 97 MA: 5-9	Increased

CHAPTER V

SUMMARY AND CONCLUSIONS

This research project began as an extension of the work already underway by the CSUN Speech Clinic. The primary purpose of this study was to determine if the six children involved in the case study would show improvement in language development after individualized instruction reinforced through behavior modification.

REVIEW OF LITERATURE

It is recognized that communication skills are critical to social adjustment and academic learning, yet often these deficiencies are not detected or treated until the child begins school. The problem then becomes one of increasing language proficiency.

Behavior modification has developed over the last decade into an extremely productive, yet often controversial, discipline.

The strength of behavior modification is that it is not a set of fixed procedures. Rather, it is an orientation in which treatment procedures continually change as new experimental information comes in.
(17:10)

Beissel used the technique of behavior modification to increase the frequency of verbalizations by a preschool child.

Recent developments in operant conditioning procedures have extended the application of learning principles to language training with speech deficient children.... (3:931)

. A common problem encountered by researchers who are involved in clinical or educational testing has been:

the selection of screening measures for children who have limited expressive vocabularies or who are verbally inhibited in testing or classroom situations. The Peabody Picture Vocabulary Test (PPVT) has been widely used to identify level of receptive language functioning and to assist in placing children in various remedial programs. (2:86-87)

Blue and Beaty identified the PLDK as one source that can be used by a teacher or clinician to aid in planning language subskill remediation. (6:73-9) The planning of a program for a child identified by testing as having a language weakness remains with the classroom teacher.

Shiach studied two groups of severely subnormal children. One group was given daily instruction with the PLDK, and, after an experimental period, this group showed significant gains over the control group.

This study lends some weight to the claims of the authors of the Peabody Language Development Kits in suggesting that even over a relatively short experimental period severely subnormal children can make substantial improvements in their language ability. (25:297)

DESCRIPTION OF STUDY

The six cases selected for study were chosen as an extension of speech therapy underway at the CSUN Speech Clinic. There were four male and two female students, ranging in age from four years and six months to six years and one month, with a mean age of five years and three months.

Cases were selected, and baseline data, in the form of the PPVT, was collected on each child prior to application of the first PLDK lesson. The children began their participation with lesson one of the PLDK and continued at their own rates of speed for twenty to thirty minutes a day, four days a week, over a period of seven weeks. Behavior modification, through the use of reinforcement tokens, was used to stimulate correct responses.

CONCLUSIONS

There was improvement in language development, as evaluated by the instruments used in the study, for five of the six cases studied. It is not known how much of the students' improvement is related to the study, and how much is a result of normal development and maturation, participation in the regular preschool activities, familiarity with the researcher, and other miscellaneous variables.

The personal relationships established between the researcher and the students in the study could have influenced test results. The children were probably nervous or somewhat anxious during the pre-testing, while they were relaxed and more confident during the post-testing. This relationship may also have been a stimulus to their learning the material covered in the lessons.

Although J.C. did not follow the same schedule of lessons as the other children, his activities were an extension of a level below the PLDK. He made tremendous improvements in length of attention span and oral language.

The testing results for K.J. showed a decrease, and her performance with the lessons fluctuated toward the end of the study, too. Although the underlying causes are not known, K.J. seemed to undergo a subtle personality change and become more aggressive. Whatever the reasons were, this could have influenced her test results.

While other factors undoubtedly influenced the performance of the individuals studied, it is reasonable to believe that individualized instruction with the PLDK and behavior modification were effective instruments in stimulating language development of the cases.

CHAPTER VI

RECOMMENDATIONS

The results of this study would seem to justify further investigation of methods or tools used to stimulate language development. Studies which examine the use of behavior modification with language development would further enhance the literature. Additional research could also be conducted to determine the most important factor in stimulating language development--the curriculum, the token reinforcement, the personal relationship, or the individualized instruction independent of reinforcement.

In order to establish more precise data and more general application of the results, it is recommended that a larger sample be used consisting of a wider age range and more varied developmental levels. If possible, a control group should be used.

An additional recommendation is made to extend Level P of the Peabody Language Development Kits to a lower level. Activities should be supplied for use with the PLDK materials for the child who is non-verbal or has an extremely short attention span.

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APPENDIX A

COMPLETE SET OF MATERIALS USED

IN THE CASE STUDY

Name _____

Date _____

INTRODUCTION TO STUDY

Procedure

Take each child individually from the classroom to the room where the study will be conducted. Briefly explain to the child that you're going to be visiting him almost daily for the next few weeks and that you're going to be playing some games with him. Talk to him in the room with the door closed to get him used to the conditions under which the study will be run. After approximately ten to fifteen minutes, or sooner if the child becomes anxious, return him to his classroom.

ActivityYesNo

1. Child enters room with
researcher

Reward

Accepted:

2. Child talks to researcher
with door closed

Reward

Accepted:

General Comments:

Name _____

Date _____

PEABODY PICTURE VOCABULARY TEST

Procedure

Pre-test using Form A.

Record responses on "Individual Test Record" provided.

ActivityYesNo

1. Child enters room with researcher

Reward

Accepted:

2. Child answers sample questions on PPVT

Reward

Accepted:

3. Child takes the PPVT

Reward

Accepted:

General Comments:

Name _____

Date _____

MISCELLANEOUS COMMENTS

[illegible]

Name _____

Date _____

WORK SHEET - LESSON 1

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Says "P. Mooney"						
2. Says his name						
3. Points to cap						
4. Points to mustache						
5. Points to bag						
6. Holds P. Mooney Stick						
7. Turns stick on						
8. Turns stick off						
9. Steps over stick						
10. Joins in chant						

*Administer reward after correct response

Note: Use a + for a clear response, and a - for an attempted response, but not necessarily distinct.

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 2

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Sings P. Mooney Song						
2. Looks in P. Mooney bag						
3. Takes chain of chips						
4. Places it around neck						
5. Returns necklace to bag						
6. Takes necklace from bag						
7. Places it around neck						
8. Marches around room						
9. Chants "March, march..."						
10. Takes off necklace						
11. Disassembles necklace						
12. Places color chip on correct pile						

* Administer reward after correct response

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 3

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Sings P. Mooney Song						
2. Sings The Learning Names Song						
3. Says first & last name						
4. Shakes hands with puppet						
5. Identifies sounds (visual):						
a. knocking on door						
b. ringing a bell						
c. snapping the fingers						
d. crushing a piece of paper						
e. whistling						
f. tapping your foot						

LESSON 3 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
6. Identifies sounds by listening:						
a. knocking on door						
b. ringing a bell						
c. snapping the fingers						
d. crushing a piece of paper						
e. whistling						
f. tapping your foot						
7. Pantomimes: a. flying						
b. driving						
*Administer reward						

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 4

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Removes fruit from bag						
2. Places fruit on table						
3. Identifies fruit						
4. Removes fruit from bag						
5. Matches it with sample						
6. Fruit ident. -sentence						
-word only						
7. Identifies missing fruit						
-sentence						
-word only						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 5

Desired Response *	Spontaneous		Imitated		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Identifies sex of manikin						
2. Identifies parts of the manikin:						
a. head						
b. neck						
c. body						
d. legs						
e. arms						
f. feet						
g. hands						
h. facial parts						
i. hair						

LESSON 5 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
3. Repeats activity & carries out action:						
a. clap						
b. jump						
c. reach up						
d. walk						
e. stretch palm & move fingers						
f. turn head						
g. open mouth						
4. Helps to reassemble manikin						
5. Follows oral commands:						
a. stand up						
b. touch your neck						
c. turn your head						

LESSON 5 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
d. touch your nose						
e. open your mouth						
f. touch your ears						
g. wave your hands						
h. close your eyes						
i. clap your hands						
j. bend your body						
k. lift your leg						
l. sit down						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 6

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Names each animal						
a. cat						
b. cow						
c. puppy						
d. rooster						
e. turkey						
f. bear						
g. frog						
h. fly						
2. Makes animal sounds						
a. cat						
b. cow						

LESSON 6 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
c. puppy						
d. rooster						
e. turkey						
f. bear						
g. frog						
h. fly						
3. Identifies animal by sound						
a. cat						
b. cow						
c. puppy						
d. rooster						
e. turkey						
f. bear						
g. frog						

LESSON 6 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
h. fly						
4. Chants animal song; sentence (), word ()						
a. cat						
b. cow						
c. puppy						
d. rooster						
e. turkey						
f. bear						
g. frog						
h. fly						

* Administer Reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 7

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Assembles disassembled manikin						
2. Identifies school clothes						
a. undershirt						
b. underwear						
c. socks						
d. shirt						
e. pants						
f. shoes						
g. belt						
3. Puts clothes on manikin						
a. undershirt						

LESSON 7 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
b. underwear						
c. socks						
d. shirt						
e. pants						
f. shoes						
g. belt						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 8

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Identifies fruit; sentence (), word ()						
a. apple						
b. banana						
c. grapes						
d. lemon						
e. orange						
f. peach						
g. pear						
h. pineapple						
2. Matches fruit if more than one is available						
3. Matches fruit with appropriate food card						

LESSON 8 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
4. Identifies fruit; sentence (), word ()						
a. apple						
b. banana						
c. grapes						
d. lemon						
e. orange						
f. peach						
g. pear						
h. pineapple						
5. Sings song; complete (), Key word (), rhythm ()						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 9

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Repeats color chip ident.; sentence (), word ()						
a. blue						
b. green						
c. black						
d. red						
e. yellow						
f. white						
g. purple						
h. orange						
2. Sings song; complete () key word (), rhythm ()						
3. Makes color chip chains						

LESSON 9 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
4. Holds up color chip chains						
a. blue						
b. green						
c. black						
d. red						
e. yellow						
f. white						
g. purple						
h. orange						
5. Places chains in P. Mooney bag by color ident.						
a. blue						
b. green						
c. black						

LESSON 9 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
d. red						
e. yellow						
f. white						
g. purple						
h. orange						
6. Jumps across chains of color chips						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 10

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Says "Mr. Nobody"						
2. Talks about the story						
3. Identifies missing body parts:						
a. feet						
b. legs						
c. body						
d. arms						
e. hands						
f. head						
4. Follows exercise instructions						
a. clap						
b. jump						

LESSON 10 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
c. blink						
d. reach						
e. run						
f. touch						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 11

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Names each animal						
a. bird						
b. owl						
c. cat						
d. cow						
e. dog						
f. duck						
g. hen						
h. horse						
i. pig						
j. rooster						
2. Points to animal by sound identification						
a. bird						

LESSON 11 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
b. owl						
c. cat						
d. cow						
e. dog						
f. duck						
g. hen						
h. horse						
i. pig						
j. rooster						
3. Names animal by sound without pictures (), or selects picture after hearing sound						
a. bird						
b. owl						
c. cat						

LESSON 11 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
d. cow						
e. dog						
f. duck						
g. hen						
h. horse						
i. pig						
j. rooster						
4. Chants song; sentence or key word (), sub- stituting						
a. bird						
b. owl						
c. cat						
d. cow						
e. dog						
f. duck						

LESSON 11 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
g. hen						
h. horse						
i. pig						
j. rooster						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 12

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Assembles the manikin						
2. Names each part; sentence (), word ()						
a. arms						
b. body						
c. feet						
d. hands						
e. head						
f. legs						
g. neck						
h. ears						
i. eyes & eyebrows						
j. hair, boy's						
k. hair, girl's						

LESSON 12 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
l. mouth						
m. nose						
3. Corrects changes to manikin						
a. remove one arm						
b. remove one leg						
c. interchange mouth & nose						
d. remove one eye						
e. remove legs & position feet at the hips						
f. remove both hands						
g. interchange hands & feet						
h. interchange arms & leg						
i. remove the ears						

LESSON 12 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
j. turn head upside down						
k. remove arms & place hands at the shoulders						
l. place mouth on the neck						
m. remove one foot						
n. remove the nose						
4. Pantomimes action						
a. make a circle with arms						
b. point to mouth						
c. point to eyes						
d. point to nose						
e. point to hair						
f. make a hat with hands						

LESSON 12 Continued						
Desired Response *	<u>Spontaneous</u>		<u>Imitation</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
g. make a feather with finger						
* Administer Reward						

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 13

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Experiments with geometric shapes						
2. Names shapes (i.e., kite)						
3. Duplicates sample shapes						
4. Sings song; Complete (), key words (), rhythm ()						
5. Hits xylophone bars in order (low to high)						
6. Hits xylophone bars in pattern of color chips						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 14

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Introduces self to Elbert, sentence name ()						
2. Identifies Family & Home Cards; sentence (), key word ()						
a. bears						
b. birds						
c. cats						
d. chickens						
e. cows						
f. dogs						
g. ducks						
h. fish						
i. frogs						

LESSON 14 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
j. horses						
k. pigs						
l. sheep						
3. Matches small with larger animal cards						
4. Repeats identification; sentence (), key word ()						
5. Pantomimes walking like an elephant						
* Administer reward						

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 15

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Identifies geometric shape by color; sentence (), word ()						
a. red						
b. yellow						
c. green						
2. Enters discussion of traffic signals						
3. Repeats the poem; complete (), few words ()						
4. Follows directions with color chips						
a. red - jump						
b. white - walk						
c. yellow - run						

LESSON 15 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
d. blue - hop						
e. orange - jump						
f. purple - walk						
g. green - run						
h. black - hop						
5. Joins in song; complete (), key words ()						

* Administer reward

Name _____ Date _____ RESPONSE RECORDING FORM - LESSON 16						
Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Touches body parts						
a. head						
b. legs						
c. arms						
d. body						
e. feet						
f. mouth						
g. eyes						
h. lips						
i. chin						
j. neck						
k. ears						
l. hands						

LESSON 16 Continued						
Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
m. nose						
n. hair						
o. fingers						
p. thumb						
q. knees						
r. elbows						
s. ankles						
2. Repeats poem						
3. Pantomimes action						
4. Responds as to use of hands/feet						
a. marching						
b. walking						
c. waving						
d. clapping						

LESSON 16 Continued

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
e. hopping						
f. knocking						
g. snapping						
h. scratching						
i. jumping						
j. touching						
k. kicking						
l. running						
5. Identifies action						
a. march						
b. touch						
c. clap						
d. hop						
e. scratch						
f. knock						

LESSON 16 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
g. wave						
h. snap						
i. walk						
j. jump						
k. kick						
l. run						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 17

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Repeats poem						
2. Pantomimes action						
3. Names body part when pointed at						
a. nose						
b. chin						
c. eyes						
d. knees						
e. hair						
f. ear						
g. lips						
h. elbows						
4. Joins in singing song; complete (), key word () rhythm ()						

LESSON 17 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
5. Pantomimes song						
6. Jumps to striking of xylophone						
7. Plays xylophone; correct patterns (), randomly ()						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 18

Desired Response *	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Dresses manikin						
2. Identifies clothing						
a. underwear						
b. slip						
c. socks						
d. dress						
e. sweater						
f. shoes						
3. Joins in song; complete (), key words (), rhythm ()						
4. Changes both manikins clothes						
5. Names articles of cloth- ing used						

LESSON 18 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
6. Pantomimes getting dressed						
7. Joins in song; complete (), key words (), rhythm ()						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 19

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Names geometric shapes; sentence (), word ()						
a. circle						
b. square						
c. triangle						
2. Sorts shapes into groups						
a. circles						
b. squares						
c. triangles						
3. Follows miscellaneous directions to move geometric shapes						
4. Identifies shapes by feeling without looking						

LESSON 19 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
a. circle						
b. square						
c. triangle						
5. Marches around shapes						
6. Joins in chant						

* Administer reward

Name _____

Date _____

RESPONSE RECORDING FORM - LESSON 20

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
1. Assembles manikin						
2. Identifies missing part; sentence (), key word ()						
a. leg						
b. arm						
c. neck						
d. foot						
e. mouth						
f. hand						
g. nose						
3. Answers guessing game about body parts						
a. see with eyes						
b. smell with nose						

LESSON 20 Continued

Desired Response*	<u>Spontaneous</u>		<u>Imitated</u>		Comprehension of idea	No Response
	Correct	Incorrect	Correct	Incorrect		
c. hear with ears						
d. chew with teeth						
4. Reviews touching & naming body parts; sentence (), word ()						
a. head						
b. neck						
c. body						
d. arms						
e. legs						
f. hands						
g. feet						
5. Joins in song; com- plete (), key words (), rhythm ()						

* Administer reward

APPENDIX B

RECORD OF DAILY OBSERVATIONS

Case Study 1: J.C.

First Day - J.C. was playing alone outside in the sandbox and would not go into the research room with the researcher. Since nothing was forced, the researcher sat and talked to him while he was playing for approximately twenty minutes.

Second Day - J.C. did leave his classroom with the researcher. The program was introduced to him to familiarize him with the conditions (facility) under which the study was to be run. The reinforcement tokens were introduced as a reward for entering the room and for staying while the researcher talked to him.

Third Day - J.C. was absent.

Fourth Day - J.C. would not leave his class to go with the researcher. He was fussy, crying, and generally disinterested.

Fifth Day - At first J.C. didn't want to go to the research room, but with the help of Mary, a preschool assistant, he did. Once there he didn't object to being closed in the room. The animal cards were used as rewards for entering the room as well as for completing activities. J.C. took the cards, but he didn't seem to

understand why he was getting them.

An unsuccessful attempt was made to administer the PPVT to J.C. he grabbed the test booklet and rejected any attempts to retrieve the booklet or turn the pages back by screaming.

Sixth Day - Class went on a field trip.

Seventh Day - The PPVT, Form A, was administered. Although he is still non-verbal, it is felt that J.C. understands even when he doesn't respond. When asked a second time he often follows the instructions. He is extremely shy and withdrawn when with the researcher. J.C.'s inattention and distraction to any noise may have affected his performance on the pre-test. Sometimes he would not answer at all.

Eighth Day - The author attempted to administer lesson 1 of the PLDK, but J.C. made no responses to any activities. He did seem to enjoy listening to the P. Mooney record. The biggest obstacle at this time is his extremely short attention span, less than 3 minutes.

Ninth Day - Since J.C. showed virtually no response to the first PLDK lesson an amended program was planned. Since he was reluctant to leave his classroom it was decided to work with him there with the aim of increasing his attention span.

The P. Mooney puppet was introduced and games of touching and pointing to various body parts were played.

His attention was good for 2-3 minutes then it would wander, but within a few minutes he would come back to the activity. He tried to repeat some of the words and said "arm" quite clearly. He attempted to say "bye-bye".

Tenth Day - J.C. immediately recognized the P. Mooney puppet and began holding out his elbows for the puppet to touch, showing he remembered the game from the day before. Attention increasing to 3-4 minutes.

Eleventh Day - The one-to-one classroom situation seems to be working. J.C. is responding well and his attention span has increased to 3-4 minutes.

Twelfth Day - Time was spent outside. J.C. was very aware of things around him; he smelled flowers, rolled a truck around, and repeated more words. Orange and red objects were identified.

Thirteenth Day - He still enjoys the touching and pointing games. The pictures of animals on the reinforcement tokens were labeled, and J.C. repeated "bear" and "tiger". He would say the name when the picture was pointed at. Working on eye contact and eliciting a pointing response.

Fourteenth Day - Class went on a field trip.

Fifteenth Day - J.C. points to himself but not to others while identifying body parts. Progressing on identifying objects by pointing or picking one from a selection of two or three.

Sixteenth Day - Rapport is increasing as he progresses, although slowly.

Seventeenth Day - It is becoming evident that his vocabulary is either larger than originally thought or it's increasing. He said "red" and "blue" and attempted to say "green".

Eighteenth Day - Class went on a field trip.

Nineteenth Day - Often J.C. will answer verbally even though the word may not be spoken clearly. He repeated "bear" and "zebra". He played with blocks where each side was either a different color or combination of colors. After mixing them up, J.C. could put all like sides up with very little difficulty.

Twentieth Day - Very few responses were obtained because J.C. was too interested in the waterplay going on.

Twenty-first Day - J.C. looked at two books with the researcher for about 25-30 minutes with only occasional lapses in attention. He would point to objects in the pictures and would usually say the word. Some of his words weren't too clear, but he was trying.

Twenty-second Day - Responding well and becoming more open and friendly.

Twenty-third Day - Pointed at objects in picture books between occasional periods of fussiness. He is beginning to verbalize in response to questions. For example, point to a picture of a bird and ask what color

it is, and he can answer correctly.

Twenty-fourth Day - Extremely hyperactive and it was difficult to get his attention. Worked on pointing and labeling.

Twenty-fifth Day - Form B of the PPVT was administered in the research room. J.C. was relaxed and cooperative.

Case Study 2: B.C.

First Day - B.C. was willing to enter the research room and did not object to the closed door. The reinforcement tokens (animal cards) were introduced and he selected his own. He seemed quite receptive to the idea of participating in the study.

Second Day - The Peabody Picture Vocabulary Test, Form A, was given to B.C. There was some difficulty in getting him to enter the research room from outside play. When the class went inside he went to the research room and responded enthusiastically. He scored an IQ of 47 on the PPVT.

Third Day - The Peabody Language Development Kits (PLDK), lesson 1, was given to B.C. For changes to the PLDK, refer to the procedure section. Refer to Appendix A for the Response Recording Forms to see the schedule for administering rewards. B.C. responded to the P. Mooney puppet immediately and began to associate the daily lessons with the puppet. He used single word imitated responses rather than spontaneous responses. He completed all the activities successfully and attempted to join in the chant at the end by repeating key words.

Fourth Day - B.C. refused to participate. He was involved in classroom activities.

Fifth Day - B.C. was absent.

Sixth Day - Class went on a field trip.

Seventh Day - The second lesson of the PLDK was administered. B.C. showed no response to singing the P. Mooney song, but responded successfully to all the other activities. B.C. was rewarded for single word responses.

Eighth Day - Lesson 3 of the PLDK. B.C. participated willingly in this lesson. He attempted to sing the P. Mooney song and repeated his name and P. Mooney's. B.C. did not know the terms crushing, snapping, or whistling but he did repeat them when demonstrated. He could identify sounds made, but resisted sentence formation and used single words. He completed all activities except he would not attempt to sing the Learning Names Song.

Ninth Day - Lesson 4 of the PLDK. B.C. was very successful with this lesson and made spontaneous responses to all activities. He only used word responses in the fruit identification. B.C. still resists sentence formation.

Tenth Day - B.C. was absent.

Eleventh Day - Lesson 5 of the PLDK. B.C. identified the sex of the manikin immediately. He was able to name most of the body parts the first time they were presented. As the lesson progressed he appeared to get confused and could not remember head, body or hands regardless of how many times they were repeated. Much assistance was needed for him to assemble the manikin, indicating poor fine motor control. He successfully completed the gross

motor activity and followed the commands correctly, with the exception of bending his body. He did not know the word until the action was demonstrated.

Twelfth Day - Lesson 6 of the PLDK. B.C. was able to identify the animals from their pictures, with only some confusion of rooster and turkey. He knew the sounds for cat, cow, frog, and fly, and he could imitate the others. He identified the animals from their sound for all but turkey. He continued to use single word responses.

Thirteenth Day - Lesson 7 of the PLDK. B.C. knew most of the body parts and knew generally where they belonged in assembling them, but he had quite a bit of difficulty in lining up the parts. For example, he would put the leg at the lower end of the body but sticking out to the side, or he'd put the neck on upside down. He also reversed things like putting the right on the left side and vice versa. He identified the clothing except for underwear and undershirt with his usual single word responses. He could repeat sentences with little difficulty when he wanted to. He needed practice to develop his fine motor ability. At the end of the lesson he said, "He's all ready for school", without any prompting.

Fourteenth Day - B.C. was absent.

Fifteenth Day - Lesson 8 of the PLDK. B.C. identified all fruit except the peach. After the fruit was labeled and its characteristics described, he usually

identified it correctly throughout the remainder of the lesson. He had no difficulty with any activities except singing the New Words to Say Song. He tried to join in by saying the name of the fruit as it was held up. When the words in the song were broken down to short phrases B.C. would repeat them.

Sixteenth Day - Lesson 9 of the PLDK. This lesson was difficult for B.C. because he didn't know his colors. Everything was labeled green. Extra time was spent in helping him to distinguish the colors. He tried but kept forgetting. The problem did not seem to be color blindness because he could match colors. He also had trouble in making the color chip chain. He couldn't control the small manipulative movements. He did not attempt to join in the song, but he completed the lesson with a successful activity of jumping.

Seventeenth Day - B.C. was absent with the chicken pox.

Eighteenth Day - B.C. was absent.

Nineteenth Day - B.C. was absent.

Twentieth Day - B.C. was absent.

Twenty-first Day - B.C. was absent.

Twenty-second Day - B.C. was absent.

Twenty-third Day - B.C. was absent.

Twenty-fourth Day - Lesson 10 of the PLDK. B.C. enjoyed the story and was able to retell it with enthusi-

asm. He had difficulty understanding that Mr. Nobody was invisible. He successfully completed the lesson. In part 4, he made a point of repeating each sentence and following the exercise.

Twenty-fifth Day - The Peabody Picture Vocabulary Test, Form B, was given to B.C. He scored an intelligence quotient of 67, twenty points higher than the pre-test.

Case Study 3: J.H.

First Day - J.H. entered the research room willingly and did not object to the closed door. He selected his own reinforcement tokens (animal cards) when they were explained. He didn't completely understand what was happening and that there would be regular meetings, but he was cooperative.

Second Day - The Peabody Picture Vocabulary Test, Form A, was given to J.H. He did not want to participate until the class went inside, too. He was very distractible pointed to things in the room, and kept jumping out of his seat. He scored an intelligence quotient of 50 on the pre-test.

Third Day - Lesson 1 of the PLDK. He seemed to enjoy meeting the P. Mooney puppet and participating in the lesson. J.H. imitated the activities and repeated the words. He tried but could not turn the P. Mooney stick on or off. He did not join in the chant.

Fourth Day - Lesson 2 of the PLDK. J.H. was able to follow directions quite well at this point, but he made limited attempts to verbalize. He understood a verbal response was desired, but would not give one. He showed some difficulty in matching color chips.

Fifth Day - J.H. was absent.

Sixth Day - Class went on a field trip.

Seventh Day - Lesson 3 of the PLDK. J.H. really

listened to the P. Mooney song and tried to join in part of it, but did not react to the Learning Names Song. He would say his first name but not his last. The rest of this lesson was adapted to fit J.H.'s limited ability. Each activity was demonstrated and identified. J.H. then repeated each of the verbs. He was then asked to demonstrate each activity in turn, which he did correctly.

Eighth Day - Lesson 4 of the PLDK. J.H. could identify all the difficult fruits by name. He did not understand the concepts of identifying the fruits that were missing or gone, therefore, he couldn't complete that part of the lesson.

Ninth Day - J.H. was absent.

Tenth Day - J.H. was absent.

Eleventh Day - J.H. was absent.

Twelfth Day - Lesson 5 of the PLDK. J.H. could name about half of the body parts without prior identification. He had difficulty in reassembling the manikin. He was not able to abstract from his own body and generalize to, or identify, other things. He did seem to know his own body parts and could follow the oral commands.

Thirteenth Day - J.H. was absent.

Fourteenth Day - J.H. was absent.

Fifteenth Day - J.H. was absent.

Sixteenth Day - J.H. was absent.

Seventeenth Day - Lesson 6 of the PLDK. Although

J.H. had been absent seven out of the last eight scheduled days, he still remembered P. Mooney and the animal cards. He still was using single word responses, but was able to name each of the animals from their pictures. He could imitate the animal sounds, but could not identify them from their sounds unassisted except for the cow, puppy, and turkey.

Eighteenth Day - Lesson 7 of the PLDK. J.H. had less difficulty assembling the manikin than he did in Lesson 5. He could not do it by himself, but did quite well following some direction. He was able to identify the clothes laid out and to put them on the manikin. He did need assistance to line up the clothes properly because of his poor fine motor control.

Nineteenth Day - Lesson 8 of the PLDK. J.H. began to show improvement in his language development. Responses were of the more than single words. He could identify all fruits but grapes, peach and pineapple spontaneously. He also could imitate short sentences.

Twentieth Day - Lesson 9 of the PLDK. He had extreme difficulty with this lesson because he didn't know his colors. His only correct responses were blue and orange. Extra time was spent helping him in color identification of green, red, and yellow. It was limited to three because he wouldn't have learned all of them at one time. He did join in the song with some key words and

make the color chip chain. He was restless, squirmed in his seat, and did not finish the rest of the lesson.

Twenty-first Day - Lesson 10 of the PLDK. J.H. listened to the story and looked at the pictures, but was not at all interested in talking about it. He didn't understand the concept of the missing parts and could only identify what he saw. He followed the exercise instructions correctly.

Twenty-second Day - Lesson 11 of the PLDK. J.H. did very well. He spontaneously named the animals and gave their sounds. Occasionally there was some confusion on the animal names, dog was Lassie, and hen was chicken. These were only slight errors and not too important. He kept time to the music and said the animal names.

Twenty-third Day - Lesson 12 of PLDK. J.H. did very well in assembling the manikin. He spontaneously named many of the parts as he put it together. He only needed assistance with one arm that was upside down, hands that were reversed, and lining up the facial features although they were in the general area. He corrected changes to the manikin and could identify the missing part by name.

Twenty-fourth Day - Lesson 13 of the PLDK. J.H. named the three shapes correctly, but was still unable to identify the colors. He tried but could not duplicate the sample shapes made, house, worm, or ice cream cone. He used either too many or too few of the geometric shapes.

He also could not strike the xylophone bar in sequence.

Twenty-fifth Day - The Peabody Picture Vocabulary Test, Form B, was given to J.H. He scored an intelligence quotient of 86, thirty-six points higher than the pre-test.

Case Study 4: N.J.

First Day - N.J. entered the research room freely. She was quite responsive to the researcher, the explanation of the study, and to the reinforcement tokens (animal cards).

Second Day - The Peabody Picture Vocabulary Test, Form A, was administered. N.J. was quite willing to enter the research room and to take the PPVT. She was allowed to select her own rewards. After approximately fifteen minutes, N.J. began to get restless. At the same time she began making incorrect responses to the PPVT. Her score on the pre-test was an intelligence quotient of 99.

Third Day - Lesson 1 of the Peabody Language Development Kits, Level P. This was a very successful experience. N.J. liked the puppet and other materials, and she responded correctly to all the activities except for joining in the chant. She pronounced P. Mooney quite clearly.

Fourth Day - Lesson 2 of the PLDK. The record of the P. Mooney song plays too fast and N.J. was not able to sing along. All other activities were completed successfully.

Fifth Day - Lesson 3 of the PLDK. N.J. is still not interested in singing with the records. She was able to imitate the activities for the sound identification, but she doesn't have the English vocabulary to describe the

action. Therefore, it was difficult to determine if there was a problem in comprehension or communication.

Sixth Day - Lesson 4 of the PLDK. Lesson was completed with no problems. N.J. used single words to identify the fruits, but she was able to imitate sentence patterns that were repeated slowly.

Seventh Day - Lesson 5 of the PLDK. N.J. was able to label the parts of the manikin correctly. There were no problems with the gross motor activities or with re-assembling the manikin.

Eighth Day - Lesson 6 of the PLDK. Simple mistakes were made when identifying the animals. N.J. called the turkey and rooster, chickens. The only spontaneous responses made on the animal sounds were for cat and puppy, but she could imitate all others. She still does not make voluntary sentence responses.

Ninth Day - Lesson 7 of the PLDK. N.J. showed very good coordination in assembling the manikin. She was able to dress the manikin and to identify all the clothing but the undershirt and underwear. She was still making single word responses.

Tenth Day - Lesson 8 of the PLDK. Correct responses, no problems. N.J. would not join in the singing.

Eleventh Day - Lesson 9 of the PLDK. She was maintaining the same level of responses. N.J. was giving correct responses, single word responses, and not

attempting to join in the singing.

Twelfth Day - Lesson 10 of the PLDK. N.J. enjoyed the story and pictures, but would not discuss the story. She had some difficulty identifying the missing body parts.

Thirteenth Day - No lesson given due to a late session at the CSUN Speech Clinic.

Fourteenth Day - Lesson 11 of the PLDK. N.J. was able to name the more common animals but had trouble with owl, duck, hen, and rooster. She could also name the animals from hearing their sounds except for owl and rooster. N.J. was restless and would not stay to complete the lesson. She left after part three.

Fifteenth Day - Lesson 12 of the PLDK. N.J. could assemble the manikin and name the parts, as well as complete the other activities.

Sixteenth Day - No lesson; the researcher was ill.

Seventeenth Day - Lesson 13 of the PLDK. She enjoyed experimenting with the geometric shapes and could identify them. She was able to play the xylophone successfully. She even fitted in some of the key words of the song and sang along.

Eighteenth Day - Lesson 14 of the PLDK. N.J. began imitating more sentences. She couldn't name the ducks, pigs, or sheep, but could complete all other activities.

Nineteenth Day - Lesson 15 of the PLDK. N.J.

definitely knows her colors. She repeated the complete poem in activity three and sang key words of the song at the end.

Twentieth Day - Lesson 16 of the PLDK. This lesson caused some difficulty for N.J. because she didn't know what some of the words meant or labeled, such as wave, touch, much, hop, snap, lips, chin, thumb, knees, elbows, and ankles.

Twenty-first Day - Lesson 17 of the PLDK. N.J. was able to correctly name the body part which she wasn't able to the lesson before. She joined in key words of the poem and song. She enjoyed playing the xylophone.

Twenty-second Day - Lesson 18 of the PLDK. N.J. enjoyed this lesson very much and stayed in the research room playing with the manikin at least ten extra minutes. She identified the articles of clothing both in English and Spanish. Sometimes she would only give the Spanish name, which couldn't be verified. She sang the song completely, a phrase at a time.

Twenty-third Day - Lesson 19 of the PLDK. She followed all directions correctly. She would give a spontaneous word response or imitate a sentence response.

Twenty-fourth Day - Lesson 20 of the PLDK. N.J. completed all activities correctly. She still will usually give a word response before a sentence response.

Twenty-fifth Day - The PPVT, Form B, was administered. Her score on the post-test was an IQ of 117.

Case Study 5: K.J.

First Day - K.J. was quite willing to enter the research room and didn't object to the closed door. When the reinforcement tokens (animal cards) were introduced, she selected her own.

Second Day - K.J. was absent.

Third Day - The Peabody Picture Vocabulary Test, Form A, was given to K.J. She was very cooperative and pointed to the answers quickly and without hesitation. She accepted her awards happily. Her IQ score was 71.

Fourth Day - Lesson 1 of the Peabody Language Development Kits, Level P. She was very soft-spoken, but she would imitate single word responses. She didn't join in the chant at all. K.J. was not able to operate the on/off switch on the P. Mooney stick.

Fifth Day - Lesson 2 of the PLDK. K.J. enjoyed the color chips, but would not participate in the P. Mooney song or the chant. She knows the basic colors and named them voluntarily as she sorted them into piles.

Sixth Day - Lesson 3 of the PLDK. K.J. is still shy and hesitant to speak. When she does it's very softly. Her comprehension is good even though she doesn't always carry out the action. She would not identify any of the sounds when watching or listening, but when asked to complete the activity she could do so correctly.

Seventh Day - Lesson 4 of the PLDK. K.J. made all

correct spontaneous responses using single words, no sentences.

Eighth Day - Lesson 5 of the PLDK. K.J. made no spontaneous, only imitated, responses to identifying parts of the manikin and carrying out action in part three. Except for bending the body, she followed all the oral commands in part five correctly.

Ninth Day - Lesson 6 of the PLDK. K.J. did very well at the beginning of the lesson naming each animal card. She could imitate the sentence patterns. She began having trouble naming the animal sounds and greater difficulty identifying the animals from their sounds. She became confused and started guessing. She no longer attempted to repeat words.

Tenth Day - Lesson 7 of the PLDK. K.J. named all parts of the manikin as she assembled it. She had some trouble mixing up right from left. Except for calling the shirt a jacket, she named the clothes correctly. K.J. knew where all the clothes belonged, but she had some difficulty with the fine motor coordination for proper alignment.

Eleventh Day - Lesson 8 of the PLDK. Although the first time through K.J. couldn't identify the peach, pear, or pineapple, she did with single word responses in part four. Did not sing any part of the song.

Twelfth Day - No lesson - Open House at the

preschool lab.

Thirteenth Day - Lesson 9 of the PLDK. A very successful lesson, except for the song. K.J. knew all the colors. She had some trouble transposing the words of the sentence response, but with practice she did better.

Fourteenth Day - K.J. was absent.

Fifteenth Day - Lesson 10 of the PLDK. K.J. enjoyed the story and pointed out objects as they were being described. She is still very shy and kept covering her face with her hands. She only repeated sentences a few times.

Sixteenth Day - No lesson - the researcher was ill.

Seventeenth Day - K.J. was absent.

Eighteenth Day - Lesson 11 of the PLDK. K.J. knew most of the animals, except for cow, by name. Except for bird and cow, she was able to identify the animals from their sounds. She named the animals in part four as the cards were picked up and then repeated the poems.

Nineteenth Day - Lesson 12 of the PLDK. No difficulties with this lesson. All activities were completed. Single word responses were made.

Twentieth Day - Lesson 13 of the PLDK. K.J. seemed to be regressing somewhat. She was only making imitated responses, and using single words instead of sentences. She enjoyed the geometric shapes, but had some difficulty playing the xylophone in color chip

patterns.

Twenty-first Day - Lesson 14 of the PLDK. K.J. did well in identifying the animals and repeating their names in singular or plural.

Twenty-second Day - Lesson 15 of the PLDK. No sentence responses were made in this lesson. She did not discuss traffic signals at all. K.J. followed directions and completed the activities.

Twenty-third Day - Lesson 16 of the PLDK. Except for the knees and elbows, K.J. identified all the body parts. She would not repeat the poem in part two. K.J. showed a tendency to drift away in part four. Part five was changed so that the action was described and K.J. carried it out. She only had trouble with touch, knock, and kick.

Twenty-fourth Day - Lesson 17 of the PLDK. K.J. is still reluctant to use sentences, unless examples were given and she was asked to repeat them. She named the body parts correctly. K.J. liked the xylophone but didn't understand how to play a pattern on it, even when it was demonstrated again and again.

Twenty-fifth Day - The Peabody Picture Vocabulary Test, Form B, was given to K.J. She scored an IQ of 59. K.J. appeared to be somewhat restless and distractible.

Case Study 6: P.R.

First Day - The case study was explained to P.R. and although a positive relationship seemed to exist, he made no intelligible verbal responses. He did not object to leaving the classroom nor to the closed door of the research room. He selected his reinforcement tokens and seemed to enjoy the animal pictures on them.

Second Day - At the time scheduled for the case study the researcher discovered that one of the preschool assistants was giving P.R. Form A of the Peabody Picture Vocabulary Test. The results she obtained were going to be used until the researcher realized that the test had been administered improperly. It was decided to retest P.R. the following day with Form B of the PPVT.

Third Day - The PPVT, Form B, was given to P.R. He scored an IQ of 86. P.R. was very distractible and had difficulty with the motor control of pointing to the correct answer. After several samples he did as he was asked, but as the lesson got progressively more difficult he began guessing.

Fourth Day - Lesson 1 of the Peabody Language Development Kits. This lesson as well as all subsequent lessons had to be adapted for P.R. because he was non-verbal. Where verbal responses were desired, a pointing response was accepted whenever possible. P.R. made some unintelligible responses when asked a question, but he

demonstrated comprehension by carrying out requests. He had difficulty with his fine motor control such as turning the P. Mooney stick on and off.

Fifth Day - Lesson 2 of the PLDK. P.R. did very well in this lesson. He had no difficulty sorting the various color chips into piles.

Sixth Day - Lesson 3 of the PLDK. When a lesson called for a record to be played it was, even though P.R. could not sing along. Each activity was demonstrated as the lesson called for, then P.R. was asked to carry out the activity as it was stated. He was rewarded for carrying out the activity correctly.

Seventh Day - Lesson 4 of the PLDK. It was difficult for P.R. to sit still during the lesson and to retain his attention. Since he has no intelligible speech he was asked to select a specific fruit and place it in the bag. He did this correctly with all the fruit. The same technique was used in identifying the missing fruit. Since he could not name it, he picked out the missing fruit from the P. Mooney bag.

Eighth Day - Lesson 5 of the PLDK. P.R. seemed to enjoy the lessons very much. He would leave an activity and run to the researcher upon seeing her. P.R. had some trouble with his fine motor control in assembling the manikin, but he appeared to know where most of the parts belonged. He tried to repeat the manikin identification,

but it was not understandable. P.R. identified parts of the manikin by pointing when a part was called out. He imitated the gross motor activities correctly and then followed oral commands as they were given.

Ninth Day - Lesson 6 of the PLDK. P.R. was extremely hyperactive and kept running around the room. His only verbal response to the animal identification was "GA", although he could point to the animal when the sound was given.

Tenth Day - Lesson 7 of the PLDK. P.R. assembled the manikin with very little assistance. He pointed to each of the parts correctly as they were named. He also could select articles of clothing when asked and place them on the manikin properly.

Eleventh Day - Lesson 8 of the PLDK. The fruit was placed on the table, and P.R. placed each one in the P. Mooney Bag as it was named. He matched all the fruits with the food cards correctly and could match them with one another.

Twelfth Day - No lesson due to Open House at the preschool lab.

Thirteenth Day - No lesson was given because P.R. refused to leave the classroom.

Fourteenth Day - Lesson 10 of the PLDK. After hearing the story once P.R. indicated he wanted to hear it again, and listened just as attentively the second time.

Parts two and three of the lesson were omitted because of P.R.'s non-verbalization. Instead he pointed to parts of the cards as they were labeled.

Fifteenth Day - Lesson 9 of the PLDK. This lesson was given out of sequence because of missing materials when it was originally to be given. P.R. removed the color chips from the P. Mooney bag and laid them on the table. He could point to each of the colors when asked and even tried to say green, yellow and red. The words were not too clear, but understandable. He made the color chain quickly and without error.

Sixteenth Day - No lesson; the researcher was ill.

Seventeenth Day - Lesson 11 of the PLDK. Each animal was named and then P.R. pointed to it. He said "dog" quite clearly, and "eow" when the cat was identified. He had very little trouble identifying the animals by pointing while listening to their sounds.

Eighteenth Day - Lesson 12 of the PLDK. This was a difficult lesson to do with P.R. because he doesn't verbalize well. He assembled the manikin with some help in lining up the parts. He pointed to all the parts as they were named. Although he could not say what was wrong with manikin in part 3, he made all the corrections. He pantomimed the action to the poem the first time through, then followed the directions without demonstrations.

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Nineteenth Day - Lesson 13 of the PLDK. P.R. duplicated the geometric shapes of the samples, and he pointed correctly to the circle, square and triangle. P.R. would not hit the xylophone bars in order, but he hit the bars in order of the color chip patterns.

Twentieth Day - Lesson 14 of the PLDK. With the exception of sheep, P.R. pointed to all the animal cards when asked. He had no trouble matching the animal cards or pantomiming.

Twenty-first Day - Lesson 15 of the PLDK. P.R. knew his colors and could point to or select the right one without hesitation. He followed directions well.

Twenty-second Day - Lesson 16 of the PLDK. He touched all body parts correctly except for ankles on the first response. Instead of naming hands or feet in activity four, P.R. would point to one or the other. In the last activity he demonstrated the activity following commands.

Twenty-third Day - Lesson 17 of the PLDK. P.R. pointed to the body parts but could not name them. He enjoyed pantomiming the poem and song and playing the xylophone in random order.

Twenty-fourth Day - Lesson 18 of the PLDK. P.R. dressed the manikin correctly, but he still showed a problem with fine motor control to align the clothes along the proper body lines. From a large selection of garments

he could pick out the correct one called for. Any labeling of clothes he said was unintelligible, but he did say "boy" and "girl" fairly clearly.

Twenty-fifth Day - The PPVT, Form A, was given to P.R. He scored an IQ of 97.